REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are anticipated or unpatentable under the provisions of 35 U.S.C. § 102 and 103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-14, 25-33, 45, 46, 47 AND 48 UNDER 35 U.S.C. § 102

A. Claims 1-14

The Examiner rejected claims 1-14 as being anticipated by US Patent 6,795,444, issued on September, 21, 2004, hereinafter referred to as "Vo." The Applicants respectfully traverse the rejection.

Vo teaches a system and method for providing wireless telephony over a packet switched network. Vo's architecture includes a public land mobile network (PLMN) portion 104, a public switched telephone network (PSTN) portion 102, a Voice-over-IP (VoIP) network portion 108 and an ANSI-136 Radio Access Network (RAN) 110, by means of an Internetworking Function (IWF) 118A and appropriate media gateways, for example, Media GW 116, disposed between the legacy POCS network portions and the VoIP portion. (See Vo, col. 9, lines 35-47.)

The Examiner's attention is directed to the fact that Vo fails to teach or to suggest a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals, where the **device** comprising an air interface, an IP/Ethernet Interface, a VoIP Media Gateway interposed between the air interface and the IP/Ethernet Interface, a VoIP signaling Gateway and a Call Control as positively claimed by the Applicants' independent claim 1. Specifically, Applicants' independent claim 1 recites:

> 1. A software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals, the device comprising:
> an air interface;
> an IP/Ethernet Interface;

a VoIP Media Gateway interposed between the air interface and the IP/Ethernet Interface for media conversion and transportation;
a VoIP signaling Gateway for controlling VoIP call processing; and,
a Call Control for controlling call processing of wireless terminals and coordinating with VoIP call processing. (Emphasis Added.)

In one embodiment, Applicants' invention is a software radio port **device** for processing Voice over IP (VoIP) data packets for wireless terminals, the device comprising an air interface, an IP/Ethernet Interface and a VoIP Media Gateway interposed between the air interface and the IP/Ethernet Interface for media conversion and transportation. The device also comprises a VoIP signal Gateway and a Call Control. (See e.g., Applicants' specification, p. 6, paragraphs [28-30]; FIG. 2) Thus, Applicants' software radio port device comprises 5 components or functional modules in a single device.

The Applicants respectfully submit that the Examiner's interpretation of Vo is not supported by Vo. Vo clearly teaches that Figures 2B and 2C are block diagrams of the various gateway. (See Vo, col. 15, ll. 23-24.) Regardless of the functionality of the various gateway, as asserted by the Examiner, the gateways taught by Vo fail to teach or suggest that the gateways, as a single device, have an air interface, an IP/Ethernet Interface or a Call Control in addition to a VoIP Media Gateway and VoIP signaling Gateway. Therefore, the gateways depicted in Figures 2B and 2C of Vo **do not** anticipate the Applicants' independent claim 1. Furthermore, Figure 3A clearly fails to anticipate Applicants' invention because all the components are not in a single device.

In addition, the Examiner's assertion that 1) Vo's element 110 is an air interface, 2) Vo's IWF 118A is an IP/Ethernet Interface, 3) Vo's Media Gateway 19 is a VoIP media gateway, 4) Vo's Signaling Gateway 13 is a VoIP signaling gateway, and 5) Vo's CCF 206 is a Call Control anticipates Applicants' independent claim 1 is simply incorrect. It should be noted that the elements cited by the Examiner are not deployed in a single device. For example, FIG. 1, FIG. 2A, FIG. 2B all clearly show that the Media Gateway 116 is external to the POCS (plain old cellular system) subportions 299A, 299B, and 299C. The simple fact that the Vo reference discloses a media gateway (deployed on the VoIP

network portion) does not anticipate Applicants' invention because it fails to disclose that a single device comprising an air interface, an IP/Ethernet Interface, a VoIP Media Gateway interposed between the air interface and the IP/Ethernet Interface, a VoIP signaling Gateway and a Call Control as positively claimed by the Applicants' independent claim 1.

Moreover, Vo also fails to support the Examiner's assertion regarding the location of the media gateways and signaling gateways. The Applicants' independent claim 1 specifically claims the location of the VoIP Media Gateway. Specifically, Applicants' independent claim 1 recites a VoIP Media Gateway interposed between the air interface and the IP/Ethernet Interface. The Examiner's assertion as to the location of the media gateway in Vo cannot stand in light of the fact that Vo specifically shows the interfaces of the media gateway in both Figures 1, 2A and 3A. In none of those figures is the Media Gateway between the air interface and the IP/Ethernet Interface.

In fact, Vo **teaches away** from Applicants' invention because the Media Gateway 116 is deployed either within the packet network 108 (See FIG. 2A) or external to both the packet network and the cellular system (See FIG. 1). In support of the Applicants' interpretation of the figures depicted in Vo, Vo specifically states that "...for example, Media GW 116, disposed between the legacy POCs network portion and the VoIP portion." (See Vo, Column 9, lines 45-47.)

In contrast, Applicants' invention teaches that the VoIP Media Gateway is interposed between the air interface and the IP/Ethernet Interface within the Software Radio Port (SRP) 15. The IWF taught by Vo, that the Examiner claimed is the same as Applicants IP/Ethernet Interface, is clearly not connected to the Media Gateway in a single port device or even shown in Figure 3A of Vo. (See *Id.*, emphasis added.) Vo clearly fails to disclose or anticipate Applicants' invention of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals, the device comprising an IP/Ethernet Interface and a VoIP Media Gateway interposed between an air interface and the

IP/Ethernet Interface for media conversion and transportation. Thus, Vo fails to anticipate Applicants' independent claim 1.

Moreover, dependent claims 2-14 depend, either directly or indirectly, from independent claim 1 and recite additional limitations. As such, and for the exact same reason set forth above, the Applicants submit that claims 2-14 are also patentable and not anticipated by Vo. As such, the Applicants respectfully request the rejection be withdrawn.

B. Claims 25-33, 47 and 48

The Examiner rejected claims 25-33 as being anticipated by US Patent 6,539,237, issued on March 25, 2003, hereinafter referred to as "Sayers." The Applicants respectfully traverse the rejection.

Sayers teaches a method and apparatus for integrated wireless communications in private and public network environments. The communication system permits users to operate freely in both public and private wireless networks using standard mobile stations. (See Sayers, col. 7, lines 35-38.) Private base stations (P-BTS) are directly connected to a private LAN and thereby enable standard wireless stations to make and receive calls over the LAN. (*Id.* at lines 42-45.)

The Examiner's attention is directed to the fact that Sayers fails to teach or to suggest a method of providing a two-way voice path between a VoIP device in a network and a mobile station, the method comprising tuning the mobile station to a digital traffic channel (DTC) to establish a voice path over the air via a Software Radio Port (SRP), establishing an RTP media path for exchange of RTP data packets via the SRP, and interconnecting the voice path over the air and the RTP path over the packet network via the SRP, as positively claimed by the Applicants' independent claim 25. Specifically, Applicants' independent claim 25 recites:

> 25. A method of providing a two-way voice path between a VoIP device in a network and a mobile station wherein a call originates at the VoIP device, the method comprising:

processing a call connection request at a VoIP call-server;
initiating mobile call set-up at a Network Server Platform (NSP);
tuning the mobile station to a digital traffic channel (DTC) to establish a voice path over the air via a Software Radio Port (SRP);
alerting both the mobile station and the VoIP device;
establishing an RTP media path for exchange of RTP data packets via the SRP; and
interconnecting the voice path over the air and the RTP path over the packet network via the SRP. (Emphasis added.)

In one embodiment, Applicants' invention is a method of providing a two-way voice path between a VoIP device in a network and a mobile station. The method tunes the mobile station to a digital traffic channel (DTC) to establish a voice path over the air via a Software Radio Port (SRP), establishes an RTP media path for exchange of RTP data packets via the SRP, and then interconnects the voice path over the air and the RTP path over the packet network via the SRP. Applicants' method establishes two different pathways to transport voice data and packetized data via the SRP. (See e.g., Applicants' specification, paragraphs [35-38]; FIG. 4.)

The Applicants respectfully submit that the claim language, contrary to the Examiner's assertion that the claim language given its broadest interpretation does not support two paths, clearly supports two distinct paths. Specifically, independent claim 25 clearly recites **establishing a voice path over the air** and **establishing an RTP media path** both via a SRP. These two paths cannot be established over a single line, even given its broadest interpretation as Examiner contends, because the voice path is established over the air and the RTP media path is established over the packet network. This interpretation is further supported by the Applicants' specification. The Applicants' specification recites,

> "In one exemplary embodiment as illustrated in Fig. 4, a two-way RTP media path may be set up via an RTP pair of ports . . . between a VoIP phone, such as the SIP phone 10, and the SRP 15. . . A two-way voice path is set up over the air between the SRP 15 and the Mobile Station (MS) 20. These two paths are interconnected at the SRP 15. . ." (See Applicants' specification, para. [0035], emphasis added.)

Consequently, Applicants respectfully submit that Sayers fails to anticipate Applicants' invention. Sayers fails to teach establishing a voice path and a RTP

media path as taught by the Applicants' invention. Sayers only teaches establishing a single RTP path. (See Sayers, col. 22, lines 22-27.) In fact, the Examiner reinforces this by the fact that he cites the same section in Sayers for the voice path limitation and RTP media path limitation as taught by Applicants' independent claim 25.

Moreover, Sayers is completely devoid of any teaching pertaining to a device that is equivalent to Applicants' Software Radio Port (SRP) that is capable of tuning the mobile station to a digital traffic channel (DTC) to establish a voice path over the air via the Software Radio Port (SRP), establishing an RTP media path for exchange of RTP data packets via the SRP, and then interconnecting the voice path over the air and the RTP path over the packet network via the SRP. Thus, Sayers clearly fails to disclose or anticipate Applicants' invention and fails to anticipate Applicants' independent claim 25.

Moreover, dependent claims 26-33 depend, either directly or indirectly, from independent claim 25 and recite additional limitations. As such, and for the exact same reason set forth above, the Applicants submit that claims 26-33 are also patentable and not anticipated by Sayers. As such, the Applicants respectfully request the rejection be withdrawn.

C. Claims 47 and 48

The Examiner rejected claims 47 and 48 as being anticipated by Sayers. The Applicants respectfully traverse the rejection.

The teachings of Sayers are discussed above. The Examiner's attention is directed to the fact that Sayers fails to teach or to suggest a method for terminating a call comprising releasing radio resources and an RTP media path at a Software Radio Port (SRP), as positively claimed by the Applicants' independent claims 47 and 48. Specifically, Applicants' independent claims 47 and 48 recite:

> 47. A method for terminating a call between a first mobile station and a second mobile station, said first mobile station associated with a first

Software Radio Port (SRP) and said second mobile station associated with a second SRP, the method comprising:

receiving a release indication at the first SRP from the first mobile station;

releasing radio resources and an RTP media path at the first SRP;

sending a call release request from the first SRP to a VoIP call-server;

sending a call release indication from the first SRP to a Network Server Platform (NSP);

receiving a release indication at the second SRP from the VoIP call-server;

sending a call release request from the second SRP to the second mobile station;

releasing radio resources and an RTP media path at the second SRP; and

sending a call release indication from the second SRP to NSP. (Emphasis added.)

48. A method for maintaining an RTP media path during handoff of a mobile station from a first Software Radio Port (SRP) to a second Software Radio Port (SRP) wherein the mobile station is connected with a party, the method comprising:

sending a handoff request from the first SRP to a Network Server Platform (NSP);

handing off the mobile station from the first SRP to the second SRP via the NSP;

sending a call transfer request from the first SRP to the NSP;

releasing radio resources at the first SRP;

detecting at the second SRP the mobile station as being tuned to a digital traffic channel and sending a conference call request to the party via a VoIP call-server;

setting up an RTP media path for exchange of RTP data packets via the second SRP when the conference call has been established;

interconnecting the voice path between the second SRP and the mobile station and the RTP path;

sending a handoff complete indication from the second SRP to the NSP;

sending a call release request from the first SRP to the party via the VoIP call-server;

releasing the RTP media path at the first SRP; and

sending call release indication from the first SRP to the NSP. (Emphasis added.)

In one embodiment, Applicants' invention is a method for terminating a call comprising releasing radio resources and an RTP media path at a Software

Radio Port (SRP). As discussed, supra, Applicants' invention discloses a method that establishes a voice path over the air via a Software Radio Port (SRP), establishes an RTP media path for exchange of RTP data packets via the SRP, and interconnects the voice path over the air and the RTP path over the packet network via the SRP. As such, both the radio resources and the RTP media path are then released at the Software Radio Port (SRP). Applicants respectfully submit that Sayers fails to teach or to suggest a Software Radio Port (SRP) as defined in Applicants' claims.

In addition, as discussed above, Sayers only teaches a single path of an RTP/RTCP path. (See Sayers, FIG. 13.) In contrast, Applicants' invention teaches establishing a voice path and a RTP media path. Consequently, Sayers cannot teach releasing both the radio resources and the RTP media path when Sayers completely fails to teach establishing a voice path and a RTP media path. Applicants respectfully submit that Sayers fails to anticipate Applicants' invention. Thus, Sayers fails to anticipate Applicants' independent claims 47 and 48. As such, the Applicants respectfully request the rejection be withdrawn.

II. REJECTION OF CLAIMS 15-24 AND 34-44 UNDER 35 U.S.C. § 103

The Examiner has rejected claims 15-24 and 34-44 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Sayers in view of US Patent 6,430,176, issued August 6, 2002, hereinafter referred to as "Christie." The rejection is respectfully traversed.

The teachings of Sayers are discussed above. Christie teaches a multimedia channel management through PSTN signaling. Christie teaches a method and system to establish a session between a first and second telecommunications infrastructure located on a separate private data network by a single telephone call. (See Christie, Abstract.)

The Examiner's attention is directed to the fact that Sayers and Christie, alone or in any permissible combination, fail to teach, show or suggest the novel concept of a method of providing a two-way voice path comprising tuning a mobile station to digital traffic channel (DTC) to establish a voice path over the air

via a Software Radio Port (SRP) and establishing an RTP media path, as positively claimed by Applicants' independent claims 15 and 34. Specifically, Applicants' independent claims 15 and 34 recite:

> 15. A method of providing a two-way voice path between a VoIP device in a network and a mobile station wherein a call originates at the mobile station, the method comprising:
> initiating mobile call set-up;
> tuning the mobile station to digital traffic channel (DTC) to establish a voice path over the air via a Software Radio Port (SRP);
> engaging a VoIP call-server to set up a VoIP call;
> generating a ringback tone to the mobile station;
> establishing an RTP media path for exchange of RTP data packets via said Software Radio Port (SRP); and
> interconnecting the voice path over the air and the RTP path over the packet network via said Software Radio Port (SRP) (Emphasis added.)
>
> 34. A method of providing a two-way voice path between a first mobile station and a second mobile station wherein the first mobile station is associated with a first Software Radio Port (SRP) and the second mobile station is associated with a second SRP and wherein a call originates at the first mobile station, the method comprising:
> initiating call set-up for the first mobile station at the first SRP;
> tuning the first mobile station to a digital traffic channel (DTC) via the first SRP to establish a voice path over the air;
> engaging a VoIP call-server to set up a VoIP call via the first SRP;
> initiating mobile call set-up for the second mobile station via a Network Server Platform (NSP);
> tuning the second mobile station to a digital traffic channel (DTC) via the second SRP to establish a voice path over the air;
> alerting the first mobile station and the second mobile station via the second SRP;
> generating a ringback tone to the first mobile station via the first SRP;
> establishing an RTP media path for exchange of RTP data packets;
> interconnecting a voice path between the first SRP and the first mobile station and an RTP path over the packet network; and
> interconnecting a voice path between the second SRP and second mobile station and an RTP path over the packet network. (Emphasis added.)

As discussed above, Sayers clearly does not teach, show or suggest a device that is equivalent to Applicants' Software Radio Port (SRP) that is capable of tuning the mobile station to a digital traffic channel (DTC) to establish a voice path over the air via the Software Radio Port (SRP), establishing an RTP media path for exchange of RTP data packets, and then interconnecting the voice path over the air and the RTP path over the packet network via the SRP. Moreover, Christie fails to bridge the substantial gap left by Sayers. Christie only teaches a method and system to establish a session between a first and second telecommunications infrastructure located on a separate private data network by a single telephone call. (See Christie, Abstract.) Christie also clearly does not teach, show or suggest a device that is equivalent to Applicants' Software Radio Port (SRP) that is capable of tuning the mobile station to a digital traffic channel (DTC) to establish a voice path over the air via the Software Radio Port (SRP), establishing an RTP media path for exchange of RTP data packets, and then interconnecting the voice path over the air and the RTP path over the packet network via the SRP. As such, the combination of Sayers and Christie does not teach, show or suggest Applicants' invention as recited in independent claims 15 and 34.

Dependent claims 16-24 and 35-44 depend, either directly or indirectly from independent claims 15 and 34, respectively, and recite additional limitations. As such, and for the exact same reasons set forth above, the Applicants submit that claims 16-24 and 35-44 are also not made obvious by the teachings of Sayers and Christie. Therefore, the Applicants respectfully request the rejection be withdrawn.

CONCLUSION

Thus, the Applicants submit that all of these claims now fully satisfy the requirements of 35 U.S.C. §§ 102 and 103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the present final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully Submitted,

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